

### **REMARKS**

Claims 21-24, 26 and 28-39 remain pending in the present application. Claims 25 and 27 have been cancelled. Claim 21 has been amended. Basis for the amendments can be found throughout the specification, claims and drawings as originally filed.

### **REJECTION UNDER 35 U.S.C. § 102**

Claims 21-39 are rejected under 35 U.S.C. § 102(e) as being anticipated by Sung (PG Pub. No. US 2002/0131914 A1). Applicants respectfully traverse this rejection. For anticipation under 35 U.S.C. § 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present.

Sung discloses ceria having a weighted numerical average particle size of not greater than 100  $\mu\text{m}$  and a catalytic component disposed on a metal oxide support. The catalyst is disposed on a carrier comprising cordierite. Claim 5 defines the ceria as having a size of 1-30 nm and Claim 6 defines the ceria as having a size of 3-20 nm. However, nothing in Sung discloses nanofilaments which have a nanometer-size diameter formed on the substrate as is defined in Claim 21 of the present invention. The catalyst assembly of Claim 21 further includes particles which have a nanometer diameter of not more than approximately 100 nanometers. Nothing in Sung discloses nanofilaments.

Previously pending Claim 25 defined the nanofilaments as extending from a surface of the substrate. This limitation has been incorporated into Claim 21 to better define the nanofilaments.

Previously pending Claim 27 defined that the particles are supported on the nanofilament. This limitation has also been added to Claim 21 to better define the nanofilaments.

The ceria described in Sung is in bulk form as described in paragraph 53, line 19, paragraph 61, line 29, paragraph 79, line 6, the bottom of paragraph 82, as well as other references in the specification. As is now defined in Claim 21, by adding dependent claims to Claim 21, the particles having the catalytic function are supported on the nanofilament extending from a surface of the substrate.

Thus, Applicants believe Claim 21, as amended, patentably distinguishes over the art of record. Likewise, Claims 22-24, 26 and 28-39, which ultimately depend from Claim 21, are also believed to patentably distinguish over the art of record. Reconsideration of the rejection is respectfully requested.

#### **CONCLUSION**

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner

believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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By: 

Michael J. Schmidt, 34,007

HARNESS, DICKEY & PIERCE, P.L.C.  
P.O. Box 828  
Bloomfield Hills, Michigan 48303  
(248) 641-1600

MJS/pmg